

In The United States Patent And
Trademark Office

Applicant: Raymond G. Blair et al.
Serial No.: 09/802,420 ✓
Filed: 9 March 2001
For: Ablative Method For Forming
RF Ceramic Block Filters

#14
Art Unit: 3729
Attorney Docket: WC0001D-A
Examiner: Alan M. Boswell

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MAY 7 INTERVIEW PROPOSED AGENDA

By Facsimile to (703) 305-3579
Commissioner for Patents
Washington, D. C. 20231

Please deliver to Examiner.

3 Pages Transmitted

Dear Examiner Boswell:

I am writing to confirm our appointment for Wednesday, May 7 – 2:00pm.

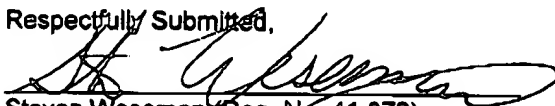
Pursuant to your request, I proposed the following agenda for our meeting.

1. A brief review of the claimed subject matter with the introduction of a product sample.
2. A discussion of whether the Takei reference (6,081,174) describes ablative etching of metallization to result in "recessing" of metallized areas.
3. Identifying which passage of Takei the Examiner intended to cite in support of the Office Action arguments regarding "recessed."
4. A discussion of whether heat treating patterned-layers in De Lillo (6,154,106) is relevant to the claimed subject matter.

A clean copy of the pending claims follows for ready reference during our conference.

Thank you very for offering time for an interview.

Respectfully Submitted,


Steven Weseman (Reg. No. 41,372)

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May 1, 2003

Claims:

27. A method of manufacturing an RF ceramic filter comprising the steps of:
forming a block of ceramic material having an outer surface with at least one pair of opposing sides and defining a plurality of through holes extending between the opposing sides;
covering the block with a conductive coating;
heat treating the coated block; and
ablatively etching a selected area of the heat-treated coated block to form a pattern of metallized and unmetallized areas on the block,
wherein the step of ablatively etching is carried out such that the unmetallized areas are recessed into the block of ceramic material.
28. The method according to claim 27 further comprising the step of heat treating the patterned block.
29. The method according to claim 27 further comprising the step of heat treating the patterned block to a temperature sufficient to reduce the filter insertion loss.
30. The method according to claim 27 wherein the step of covering the block with a conductive coating includes contacting the block with a silver paste.
31. The method according to claim 27 wherein the step of ablatively etching the block is carried out using a laser beam.
32. The method according to claim 27 wherein the step of ablatively etching the block is carried out using a scanning laser.
33. A method of manufacturing an RF ceramic filter comprising the steps of:
providing a ceramic block having an outer surface with at least one pair of opposing sides and defining a plurality of through holes extending between the opposing sides;
encasing the block with a conductive coating;
heat treating the coated block;
ablatively etching the conductive coating and a portion of the ceramic block from selected areas of the heat-treated coated block to form a pattern of metallized and unmetallized recessed areas on the block; and
heat treating the patterned block.

34. The method according to claim 33 wherein the step of ablatively etching the block is carried out using a scanning laser.

35. The method according to claim 33 further comprising the step of heat treating the patterned block to a temperature sufficient to reduce the filter insertion loss.

36. The method according to claim 33 wherein the step of ablatively etching the block is carried out using a laser beam.

37. A method of manufacturing an RF ceramic filter comprising the steps of:
providing a block of ceramic material;
encasing the block with a conductive coating;
heat treating the coated block;
ablatively etching with a laser selected areas of the heat-treated coated block to form a pattern of unmetallized recessed areas and unablated metallized areas on the block; and

heat treating the patterned block.

38 (amended). A method of manufacturing an RF ceramic filter comprising the steps of:

(a) providing a ceramic block having an outer surface with at least one pair of opposing sides and defining a plurality of through holes extending between the opposing sides;

(b) encasing the block with a conductive coating;

(c) heat treating the coated block;

(d) ablatively etching with a laser the conductive metal coating and a portion of the [underlying] ceramic block from selected areas of the heat-treated coated block to form a pattern of metallized and unmetallized recessed areas on the block,

wherein the pattern of metallized and unmetallized recessed areas includes a transmitter pad, an antenna pad and a receiver pad;

repeating steps (a) through (d) to make a plurality of patterned blocks and thereafter heat treating the plurality of patterned blocks.